We claim:

1   1. A method for determining an antialiased intensity of a component of a pixel,

2   comprising:

3   representing a set of objects with a set of two-dimensional distance fields,

4   there being one distance field for each object;

5   associating, for each distance field in the set of two-dimensional distance

6   fields, a corresponding set of sample points with the component of the pixel;

7   determining, for each distance field in the set of two-dimensional distance

8   fields, a corresponding distance using the corresponding set of sample points;

9   combining the corresponding distances to determine a combined distance;

10 and

11 mapping the combined distance to the antialiased intensity of the component

12 of the pixel.

1   2. The method of claim 1 wherein the combining performs a maximum of the

2   corresponding distances to determine the combined distance.

1   3. The method of claim 1 wherein the combining performs an arithmetic average of

2   the corresponding distances to determine the combined distance.

1   4. The method of claim 1 wherein the combining performs a union of the

2   corresponding distances to determine the combined distance.

1   5. The method of claim 1 wherein the combining performs an intersection of the

2   corresponding distances to determine the combined distance.

1   6. The method of claim 1 wherein the combining performs a difference of the

2   corresponding distances to determine the combined distance.

1   7. The method of claim 1 wherein the combining performs an implicit blend of the

2   corresponding distances to determine the combined distance.

1   8. The method of claim 1 wherein the combining performs an arithmetic operation

2   on the corresponding distances to determine the combined distance.

1   9. The method of claim 1 wherein the combining performs a conditional operation

2   on the corresponding distances to determine the combined distance.

1   10. The method of claim 1 wherein the combining uses a procedure to determine

2   the combined distance.

1   11. The method of claim 1 wherein the combining uses a table to determine the

2   combined distance.

1   12. An apparatus for determining an antialiased intensity of a component of a

2   pixel, comprising:

3   a means for representing a set of objects with a set of two-dimensional

4   distance fields, there being one distance field for each object;

5   a means for associating, for each distance field in the set of two-dimensional

6   distance fields, a corresponding set of sample points with the component of the

7   pixel;

8   a means for determining, for each distance field in the set of two-

9   dimensional distance fields, a corresponding distance using the corresponding set

10   of sample points;

11   a means for combining the corresponding distances to determine a combined

12   distance;

13   a means for mapping the combined distance to the antialiased intensity of

14   the component of the pixel; and

15   a display device for displaying the antialiased intensity of the component of

16   the pixel.

1   13. The apparatus of claim 12 wherein the display device is a CRT monitor.

1   14. The apparatus of claim 12 wherein the display device is an LCD monitor.

1   15. The apparatus of claim 12 wherein the display device is an OLED monitor.

1   16. The apparatus of claim 12 wherein the display device comprises a set of

2   components, wherein each component in the set of components is individually

3   addressable.

1   17. The apparatus of claim 12 wherein the display device is a part of a personal

2   digital assistant.

1   18. The apparatus of claim 12 wherein the display device is a part of a

2   communication device.

1   19. The apparatus of claim 12 wherein the display device is a part of a gaming

2   device.

1   20. The apparatus of claim 12 wherein the display device is a part of an appliance.

1   21. The apparatus of claim 12 wherein the display device is a part of an electronic

2   device.